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Section II. (Remarks)**Acknowledgement of Allowable Subject Matter**

The Examiner's indication in the August 17, 2006 Office Action, that claims 3-4, 7, 11-12, 22-23, 26 and 30 of the subject application would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims, is acknowledged.

In response, new claims 37 and 38 have been added, as linking claims specifying allowable subject matter.

New claim 37 is directed to a fluid storage and dispensing apparatus recited in terms consistent with claim 1, with the added limitation that "said fluid storage and dispensing apparatus comprises at least one of the features (a) -(c):

- (a) said fluid storage and dispensing vessel containing tris(trifluoromethyl)stibine;
- (b) said shrink-wrapped film containing copper sulfate; and
- (c) said shrink-wrapped film containing copper hydroxide."

Such features (a)-(c) embody the subject matter of indicated allowable claims 7, 11 and 12, and claim 37 therefore is likewise allowable.

In corresponding manner, in claim 38 is directed to a method recited in terms consistent with claim 19, with the added limitation that " said method is characterized by at least one of the features (a) -(c):

- (a) said fluid storage and dispensing vessel containing tris(trifluoromethyl)stibine;
- (b) said shrink-wrapped film containing copper sulfate; and
- (c) said shrink-wrapped film containing copper hydroxide."

Such features (a)-(c) embody the subject matter of indicated allowable claims 22, 23 and 30, and claim 38 therefore is likewise allowable.

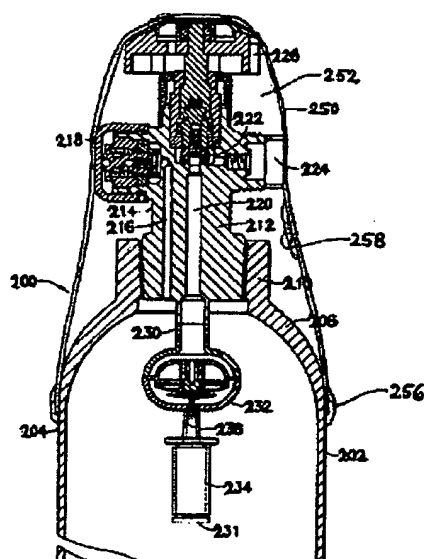
Amendment of Claims 1, 19 and 26

Claims 1, 19 and 26 have been amended herein. Claim 1 has been amended to recite a fluid storage and dispensing apparatus of the type shown and described in connection with Figures 1-3

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of the application, wherein the colorimetric film shrouds the neck of the fluid storage and dispensing vessel and the valve head assembly attached to such neck, to create an enclosed void volume. See, for example, the disclosure at page 10, lines 18-19 ("the cylinder 10 may be shrouded with a film 32 to enclose and overlie the upper portion of the vessel") and page 13, lines 23 of 25 ("By such shrink-wrapping, the shoulder region of vessel 202, the neck portion of the vessel and the valve head assembly are enclosed by the shrink-wrapped film 250, in the interior volume 252 overlaid by the film").

Set out below is a reproduction of a portion of Figure 3 of the application, showing such structure as including the interior void volume 252, the shrink-wrapped film 250, the valve head assembly 214 and the vessel neck 208 of the fluid storage and dispensing vessel 202.



a portion of FIG. 3 of the present application

It will be appreciated that as a result of such structural arrangement, any gas leakage from the vessel 202 and its neck, or at the valve head assembly 214, which are the locations most at risk in such apparatus for leakage, will pass into the interior void volume 252 and distribute throughout the enclosed interior void volume to effect a color change in the shrink-wrapped film surrounding the neck portion and valve head assembly.

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As a result, the leakage is distributed through a full circumferential extent (360°) about the vessel, so that the leak is readily visually discernible by corresponding color change, even when the vessel is in a tank farm or on a truck bed and visible from only a specific or limited direction that may not necessarily be "in register" with the leak in the leaking neck portion or valve head assembly. By providing an enclosed void volume, the leakage is distributed and a greater area of color change results. This is not disclosed or suggested in the prior art.

Claim 1 has therefore been amended to recite

1.A fluid storage and dispensing apparatus comprising a fluid storage and dispensing vessel including a neck portion and a valve head assembly attached to said vessel at said neck portion, and a shrink-wrapped colorimetric film effective in the presence of leaking gas from said vessel to undergo a color change indicative of said leaking gas, said shrink-wrapped colorimetric film being sealed to an exterior surface of the vessel and overlying the neck portion of the vessel and the valve head assembly to define an interior void volume enclosed by the shrink-wrapped film, wherein said enclosed interior void volume surrounds the neck portion and valve head assembly, whereby gas leakage at said neck portion or at said valve head assembly can enter the enclosed interior void volume and distribute throughout said enclosed interior void volume to effect a color change in the shrink-wrapped film surrounding the neck portion and valve head assembly, thereby providing a visually perceptible response to a leakage event.

Corresponding change has been made by amendment of method claim 19.

Claim 26 has been amended to further recite that the film "comprises a poly(vinylpyridine) film." Such recital is fully consistent with and supported by the original disclosure of the application, as for example at page 9, lines 12-13 ("the heat-shrink film may be formed of poly (vinylpyridine)").

Accordingly, no new matter (35 USC 132) has been added by the present amendments of claims 1, 19 and 26.

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Further, claim 1, from which claims 2-18 directly or indirectly depend, and claim 19, from which claims 20-36 directly or indirectly depend, have been amended in a manner that demarcates over the cited references, and places the application in condition for allowance.

Rejection of Claims on Reference Grounds

In the August 17, 2006 Office Action, claims 1-2, 5-6, 8-10, 13-21, 24-25, 27-29 and 31-36 as then pending were rejected on reference grounds, including:

- a rejection of claims 1, 6, 10, 13-15, 19-20, 25, 29 and 31-33 under 35 USC §102(b) as being anticipated by Kondo, et al.;
- a rejection of claims 1, 2, 5-6, 8, 10, 14-21, 24-25, 27-29 and 31-36 under 35 USC §103 as being unpatentable over Puri, et al. in view of Kondo, et al.;
- a rejection of claims 1, 5-6, 10, 15-20, 25, 29, 31 and 33-36 under 35 USC §103(a) as being unpatentable over Moore (U.S. Patent No. 5,447,688) in view of Kondo, et al.;
- a rejection of claims 1, 6, 10, 15-20, 25, 29, 31 and 33-36 under 35 USC §103(a) as being unpatentable over Mallow, et al (U.S. Patent No. 5,322,797) in view of Kondo, et al.;
- a rejection of claims 1, 6, 8, 10, 15-20, 25, 27-29, 31 and 33-36 under 35 USC §103(a) as being unpatentable over Matthiessen (U.S. Patent No. 4,106,428) in view of Kondo, et al.;
- a rejection of claims 2 and 21 under 35 USC §103(a) as being unpatentable over Kondo, et al. as applied to claims 1 and 19, and further in view of Wells, et al. (U.S. Patent No. 4,958,895); and
- a rejection of claims 9 and 28 under 35 USC §103(a) as being unpatentable over Kondo, et al. as applied to claims 1 and 19, and further in view of DeGuire, et al. (U.S. Patent No. 5,352,517).

Such rejections are traversed, in application to claims 1-36 as amended, and claims 37 and 38 as added, in light of the following remarks.

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Patentable Demarcation of Amended Claims 1-36 and New Claims 37-38

Amended claim 1 recites, inter alia,

“...shrink-wrapped colorimetric film effective in the presence of leaking gas from said vessel to undergo a color change indicative of said leaking gas

... shrink-wrapped colorimetric film being sealed to an exterior surface of the vessel and overlying the neck portion of the vessel and the valve head assembly to define an interior void volume enclosed by the shrink-wrapped film,

said enclosed interior void volume surrounds the neck portion and valve head assembly, ...

gas leakage at said neck portion or at said valve head assembly can enter the enclosed interior void volume and distribute throughout said enclosed interior void volume to effect a color change in the shrink-wrapped film surrounding the neck portion and valve head assembly...”

No such structure or arrangement is disclosed or in any way suggested by the various cited references. None of the cited references or reference combinations discloses or suggests a shrink-wrapped colorimetric film overlying a neck portion of the vessel and an attached valve head assembly to define an interior void volume enclosed by the film, in which such interior void volume is adapted to permit the leaking gas to distribute throughout such volume to produce a circumferentially (360°) extended color change for visual perception of a leakage event.

In this respect, if the colorimetric film were shrink-wrapped on the storage and dispensing vessel without such interior void volume for leakage distribution and gas contact effecting color change throughout the surrounding film, then any leakage would have to diffuse through the shrink-wrapped film, as a localized "color bleed" phenomenon, which would only be visible if one were looking at the specific side of the fluid storage and distribution vessel at which leakage was actually taking place.

If, for example, the fluid storage and dispensing vessel was on a truck bed and the leak was at a front of the vessel adjacent to the truck cab, then one viewing the vessel from the rear of the truck would not see the discolored film indicative of leakage on the front of the vessel, since the

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shrink-wrapped film over the site of the leak would keep the color change localized to the immediate site of the leak at the front of the vessel. This in turn could create a very hazardous circumstance involving the undetected leakage of gas that may be toxic or otherwise deleterious.

The invention therefore achieves a substantial advance in the art, in application to fluid storage and dispensing vessels that contain chemical reagent gases of a hazardous character, by the provision of shrink-wrapped colorimetric film that overlies a neck portion of the vessel and an attached valve head assembly to define an interior void volume enclosed by the film, in which the interior void volume permits the leaking gas to distribute throughout the void volume and produce a circumferentially (360°) extended color change for visual perception of a leakage event.

No such structure or associated methodology is anywhere disclosed or derivable from any of the cited references or reference combinations, of (1) Kondo, et al.; (2) Puri, et al. in view of Kondo, et al.; (3) Moore in view of Kondo, et al.; (4) Mallow, et al in view of Kondo, et al.; (5) Matthiessen in view of Kondo, et al.; (6) Kondo, et al. in view of Wells, et al.; or (7) Kondo, et al. in view of DeGuire, et al.

Accordingly, it is submitted that the fluid storage and dispensing apparatus recited in applicants' claims 1-18 and associated methodology recited in applicants' claims 19-36 are fully patentably distinguished over the cited references, and that such claims 1-36 therefore are in condition for allowance.

It also is submitted that newly added claims 37 and 38, by virtue of their recitation of subject matter of previously indicated allowable claims, are now likewise in form and condition for allowance.

Favorable action therefore is requested.

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Fee Payable for Added Claims 37 and 38; Petition for Extension of Time

Petition hereby is made under the provisions of 37 CFR 1.136 for a two-month extension of time for reply to the August 17, 2006 Office Action. The fee of \$450 for such extension is enclosed in the amount authorized to be charged to the credit card identified in the accompanying Credit Card Authorization Form.

The fee of \$300 payable for added claims 37 and 38, increasing the number of independent claims to four, and the total number of claims by two, is likewise enclosed in the amount authorized be charged to the credit card identified in the accompanying Credit Card Authorization Form.

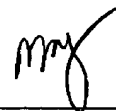
Accordingly, a fee of \$750 is authorized be charged to such credit card in the accompanying Credit Card Authorization Form.

Authorization also is hereby given to charge the amount of any additional fee or amount properly payable in connection with filing and entry of this response, to Deposit Account No. 08-3284 of Intellectual Property/Technology Law.

CONCLUSION

Claims 1-38 are fully patentably distinguished over the cited references, and are in form and condition for allowance. Issue of a Notice of Allowance for the application is therefore respectfully requested.

Respectfully submitted,



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